DOCUMENT RESUME

ED 104 438 IR 001 842

AUTHOR Chapple, Sharon E.
TITLE Canadian Experience with MARC.
INSTITUTION National Library of Canada, Ottawa (Ontario). Research and Planning Branch.
PUB DATE Nov 74
NOTE 15p.; Paper presented at the General Council Meeting of the International Federation of Library Associations (40th, Washington, D.C., November 16-23, 1974)

EDRS PRICE MF-$0.76 HC-$1.58 PLUS POSTAGE
DESCRIPTORS Bibliographic Citations; *Bilingualism; *Cataloging; *Data Bases; Information Storage; Magnetic Tapes; National Libraries; Serials
IDENTIFIERS *Canada; Canadiana; IFLA 74; Machine Readable Cataloging; MARC; Mini MARC

ABSTRACT

Canadian libraries have used Machine-readable Cataloging (MARC) since its beginnings in 1966, mainly for speeding up the cataloging of American imprints. The lack of bilingualism in Library of Congress MARC records was a major deficiency in Canada where bilingual access points are provided for all publications in the national bibliography, "Canadiana," and where bilingual publications are cataloged in both English and French. In 1973, work began on a Canadian MARC format with bilingual access points, and Canadian MARC tapes were soon being produced. MARC serial record creation was scheduled to begin with the publication of the 1975 issues of "Canadiana." For libraries that could not afford to create full MARC records, Mini-MARC, a subset of Canadian MARC containing the minimum acceptable amount of data to uniquely identify a record, was developed. (PF)

BEST COPY AVAILABLE

ED104438

IFLA Committee on
Bibliography

# Canadian Experience With MARC

Sharon E. Chapple
Senior MARC Librarian
Canadian MARC Office
Research and Planning Branch
National Library of Canada

July, 1974

IR 001 842

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

## Introduction

The purpose of this paper is to discuss briefly the Canadian experience with MARC (MAchine-Readable Cataloguing) particularly with a view towards the implications for international use of MARC records.

## Background

Canadians have been involved with MARC since its beginnings in 1966. A Canadian university, the University of Toronto, was one of the participants in the Library of Congress (LC) MARC Pilot Project conducted from November 1966 to June 1967. The LC MARC II tapes and the British MARC tapes are now received by the University of Toronto's Library Automation System (UTLAS) and are an integral part of its data base. The university is using the tapes in a variety of ways, particularly however in the area of cataloguing support. The UTLAS is now making access to its data base available on a commercial basis to other libraries and consortia.

The University of Saskatchewan is another pioneer in the use of MARC. By 1968, Saskatchewan was receiving LC MARC tapes on a regular basis and had developed applications programs for Selective Dissemination of the MARC records (SELDOM), and for cataloguing and acquisitions support as Phase I of its Technical Services Automation program (TESA-1).

Four other Canadian university libraries and two special libraries are currently subscribers to the LC MARC II tapes. Many other Canadian libraries use the MARC data made available in microfiche, microfilm or

card copy from commercial firms or processing centres that use the LC MARC II tapes in their data bases.

The MARC communication format for distributing cataloguing records was designed to override any hardware peculiarities of the different types of computers to which a library may have access. The adaptability of the MARC format has enhanced its appeal.

However, the primary reason for Canadian interest in and use of MARC records is cataloguing expediency. Canadian cataloguing practice is inextricably linked to British and American cataloguing practice. A large percentage of acquisitions in Canadian libraries have either British or American imprints. Therefore, the British National Bibliography and the Catalogue of the British Museum have long been used as a source of cataloguing information by Canadian libraries. Similarly, Canadians have always relied extensively on the Library of Congress and the National Union Catalogue for cataloguing information and the interpretation of cataloguing rules.

Prior to 1967, Canadian libraries used the American Library Association Cataloguing Rules (ALA). The Canadian Library Association is one of three joint authors of the Anglo-American Cataloguing Rules (AACR). The other two authors are the American Library Association and the Library Association (Great Britain).

Because of these close ties with the Library of Congress in particular, most Canadian libraries followed LC's lead in applying the policy of superimposition. In this policy, headings that had been established prior to 1967 would continue to be used according to the ALA form of entry by which they had been established. New headings, however, would be established according to AACR.

Therefore, when LC cataloguing was made available in machine-readable form, the impetus to develop programs to use this information was strong.

In spite of this interest in LC MARC and in British MARC, Canadian libraries were aware that these MARC formats did not meet all their requirements. The primary requirement not met by existing formats was that of bilingualism. The MARC format had been developed to service only a unilingual user community.

The Canadian Task Group on Cataloguing Standards had recommended that bilingual access points be provided for all publications in the national bibliography, Canadiana, and that bilingual publications be catalogued in Canada's two official languages, English and French. The MARC II format could handle only the latter recommendation, since no provision had been made for multiple representations of certain fields such as the main entry.

Canadian MARC Format

The National Librarian appointed the MARC Task Group to investigate the feasibility of meeting the recommendations of the Task Group on Cataloguing Standards and to provide recommendations for a Canadian MARC format. The MARC Task Group presented its report in 1972.

Using the recommendations from the MARC Task Group, the Canadian MARC Office, formed in January 1973, began developing the Canadian MARC formats. The Canadian MARC Communication Format: Monographs was published in the fall of 1973. The Canadian MARC Communication Format: Serials will be published in the fall of 1974. Work is well advanced on an authority file format. Development of a format for audio-visual materials will commence in the fall of 1974.

The Canadian MARC formats are compatible with the LC MARC formats. In fact, with few modifications, the same applications programs can be used to process both tapes. The Canadian formats do, however, include some extra fields and subfields, although an effort was made to ensure that there was no conflict with LC's use of a particular field or subfield. The Canadian MARC Office and the MARC Development Office at LC are working closely together to ensure compatibility in existing formats and in future format development. There was also considerable

consultation with the British Library and Bibliothèque nationale (Paris) in the development stage. International contacts are maintained on a continuing basis by the participation of the Head, Canadian MARC Office on the International Federation of Library Associations (IFLA) Working Group on Content Designators.

Differences between CAN/MARC and LC MARC

The major difference between the two formats is the Canadian provision for bilingual equivalences for record access points. The National Library uses English as the language of cataloguing for all publications in the English or non-Romance languages. Publications in the French language, or in any one of the Romance languages are catalogued in French. Bilingual books are catalogued separately in both official languages.

Subject headings are given in both English and French for all unilingual books. Equivalences in the other official language, if they exist, are provided for all access points where necessary, such as the main entry (1XX's) or added entries (7XX's). Figure 1 illustrates the use of equivalences in Canadian MARC.

Canadian MARC Tape Pilot Distribution Project

To test the Canadian MARC monographs format and to determine the feasibility of starting a Canadian MARC Tape Distribution Service, a

```
          0     5 6 7 8  10 11 12    17 18 19 20 21 22

740003445 01067 n a m    2  2  00241 0  i     4  5  00

          0   3    7

          001 0013 00000    740003445 ‡
          008 0045 00013    731126s1972   onca      b     0001   fre      ‡
          020 0039 00058     ‡a0888720254‡bRel. en spirale  :‡c$2.‡
          041 0011 00097    1 ‡afreeng‡
          050 0010 00108    03‡aZ695*‡
          082 0010 00118     ‡a027.8‡
          110 0100 00128    20‡aF´ed´eration des instituteurs de l'Ontario.‡bSous-comit´e des normes d'un
                            centre de ressources.‡
          245 0161 00228    14‡aLes normes d'un centre de resources /‡esous-comit´e de l'O.T.F. des normes
                            d'un centre de ressources  :  Malcolm Binks [et al.]‡fTraduit par Evelyne LaForest.‡
          260 0067 000389   1 ‡aToronto  :‡bF´ed´eration des instituteurs de l'Ontario,‡cc1972.‡
          265 0093 00456     ‡aF´ed´eration des instituteurs de l'Ontario, bureau 550, 1260, rue Bay,
                             Toronto 185, Ont.‡
          300 0032 00549     ‡alv, 36 p.  :‡bill.  ;‡c28 cm.‡
          500 0046 00581     ‡aTraduction de Resource centre guidelines.‡
          504 0029 00627     ‡aBibliographie: p. 35-36.‡
          650 0030 00656    6‡aBiblioth`eques scolaires.‡
          650 0022 00686    0‡aSchool libraries.‡
          700 0020 00708    10‡aBinks, Malcolm.‡
          910 0077 00728    10‡aOntario Teachers' Federation.‡bResource Centre Guidelines Sub-committee.‡
          990 0021 00805    00‡a9100lab‡b1100lab‡
```

Figure 1: Record in Canadian MARC Communication Format: Monographs

An equivalence (Field 910) is provided for the main entry (Field 110). The linking field 990 links the two fields. English and French subject headings have been provided (Field 650).

Canadian MARC Tape Pilot Distribution Project was begun in November 1973. The project will end in December 1974. There are eleven Canadian participants in the pilot project. Two of the participants are special scientific libraries, seven are university libraries, one is a processing centre for college libraries and one is a consortium of university libraries. The computer facilities of the UTLAS are being used by this consortium. Since the Canadian MARC tapes are then part of the data base held at UTLAS, other users, including public libraries in Ontario are able to search the CAN/MARC tapes.

The participants are receiving the tapes on a regular weekly basis, each tape representing the weekly cataloguing input which subsequently appears in a monthly issue of Canadiana, the national bibliography. The National Library is presently distributing single-level records for monographs only, but plans to expand the tape service to include serials and audio-visual materials.

Tapes are available in 7- or 9-track, ASCII code, 556 b.p.i., 800 b.p.i., or 1600 b.p.i. The 9-track 1600 b.p.i. tapes are also available in EBCDIC, National Library internal character set. However, future expansion of the tape services might necessitate eliminating some of the types of tapes available.

The participants will provide the National Library with feedback on the Canadian MARC format and on the use of the tapes in a variety of applications, such as book selection, cataloguing and cataloguing support systems, subject heading analysis (in particular, the French - English equivalences), SDI and other current awareness projects.

A sample tape was also made available to interested Canadian library schools which wished to use the tape in teaching or in research projects.

In addition, Canadian MARC tapes will be supplied by the National Library free of charge to other national libraries or national bibliographic centres in exchange for their own tapes. The national centres would be free to distribute the records to libraries in their country, provided that they grant the National Library the same privilege. This will foster the principle of Universal Bibliographic Control. The National Library will negotiate individual arrangements with countries which would like to receive our tapes but which have not yet developed their own tape service.

The Bibliothèque Royale Albert 1$^{er}$ of Belgium is now receiving the weekly Canadian MARC tapes. Exchanges with other national libraries are being negotiated.

Uses of Canadian MARC at the National Library

Difficulties were not experienced in adapting MARC to suit Canadian needs and applying the resulting Canadian MARC to Canadiana and National Library internal cataloguing. Nevertheless, the fact that the cataloguing

standards on which MARC was based were not stabilized or uniformly applied, did create problems. The National Library does not follow the principle of superimposition, but is using the latest version of the North American edition of AACR. The latest edition of the International Standard Bibliographic Description for Monographs (ISBD(M)) is used for descriptive cataloguing. When the final version of the International Standard Bibliographic Description for Serials (ISBD(S)) is available, the National Library plans to implement it. Use of these two standards should improve the utility of Canadian MARC records in an international record exchange.

MARC records are created for all monographs that appear in Canadiana. MARC serial record creation will begin with the publication of the 1975 issues of the national bibliography.

Although bilingual access points are available for all unilingual publications in Canadiana, the cataloguing notes are available only in the language of publication. As a result of the bilingual access points and some additional fields in Canadian MARC, Canadian MARC records are longer than either the British or LC MARC records. The current Canadian MARC format adequately meets the requirements of bilingual access points, but whether it is the most efficient method of offering such access is currently under review. An alternative would be to store the bilingual access points in an automated authority file with links to the bibliographic file to provide records with either French or English headings, or both, as the user requires.

MARC Record Service

The National Library is investigating the possibility of establishing a selected MARC record service. This service could expand from a simple to a more sophisticated version. The simplest form the service could take would be for the National Library to distribute, on a weekly basis, all the foreign and Canadian MARC records received in a week. A variation of this would be for the National Library to convert these tapes to Canadian MARC and make them available to Canadian libraries. The National Library could select on request, records from the combined data base of records from CAN/MARC tapes, the Canadian National Union Catalogue (CANUC), and foreign MARC tapes. In the most sophisticated form of this service, the system would be on-line. Initially requests could be received on key-punched cards or Telex and the information sent back by tape, Telex or printed cards.

Mini-MARC

To facilitate the exchange of machine-readable records, the National Library has also developed a subset of Canadian MARC, called mini-MARC. This subset was designed for use in reporting accessions to the Canadian Union Catalogue. Mini-MARC represents the minimum acceptable amount of data which can be used to uniquely identify the machine-readable record and, therefore, provides libraries that can not afford to create the full MARC records an opportunity to report to the Canadian National Union Catalogue (CANUC) and to receive records from the National Library.

Mini-MARC formats have been developed for the Canadian MARC monographs communication format and serials communication format. The mini-MARC formats retain the same tagging structure as the full Canadian MARC formats but do not require the complete coding of all the data elements. Data element values that cannot be determined with certainty are given a 'fill character' value. The fill character can be used in tags, indicators, subfield codes and fixed fields. Certain data elements cannot contain 'fill characters.' A reporting status is associated with each data element. These status categories are indicated in the mini-MARC formats as mandatory (i.e. record length field in the leader), or essential if applicable (i.e. field 1XX unless the title field 245 is the main entry), or required if available (i.e. subject added entry, field 6XX). Many other fields, however, can contain fill characters. Thus, in using the mini-MARC formats, flexible alternatives to full MARC coding and completness of records can be provided.

## Conclusion

The Canadian experience with MARC has demonstrated the feasibility of using MARC to provide a bilingual service. This successful provision of a bilingual record service has relevance for other countries with more than one national language, or groups of countries with more than one common language. Both Belgium and several countries in South America have expressed interest in the Canadian formats.

Canadian participation in such international projects as the International Serials Data System (ISDS), and in the Canadian-American CONSER (CONsolidation of SERials data bases, formerly known as CONversion of SERials) project will provide opportunities to test these bilingual capabilities in an international atmosphere.

The use of Canadian MARC records in our national bibliography and in international cataloguing projects will demonstrate the flexibility of the MARC record format. The exacting detail demanded by a national bibliography, as well as the lesser amount of detail required in international projects, such as ISDS and CONSER, can be retrieved from the same format.

In spite of the flexibility of the MARC record, further international exchange of records may be hampered by the lack of an international cataloguing code. The future of MARC record exchange may be in the firm commitment of each country to Universal Bibliographic Control, coupled with the development of sophisticated authority file systems to convert another country's MARC records into one's own format.

## Selected Bibliography on Canadian Experience with MARC


1. Anable, Richard. The CONSER Project: a Progress Report (Paper presented at the CACUL Workshop on Automated Systems, Winnipeg, June 22-3, 1974).

2. Avram, Henriette D. The MARC Pilot Project. Washington, D.C., Library of Congress, 1968. pp.143 - 148.

3. Buchinski, Edwin. Authority Files at the National Library: Plans and Developments. (Paper presented at the CACUL Workshop on Automated Systems, Winnipeg, June 22-3, 1974).

4. Buchinski, Edwin. Canadian MARC Development. (Paper presented at the CACUL Workshop on Library Automation, Sackville, June 16, 1973).

5. Buchinski, Edwin. Newman, William L. "The Cataloguing System at the University of Saskatchewan, Saskatoon; a Sub-system of TESA-1 (Technical Services Automation - Phase 1)." In Automation in Libraries: papers presented at the CACUL Workshop on Library Automation, Vancouver, B.C., June 19-20, 1971. Ottawa, Canadian Association of College and University Libraries, 1971. pp. 3-1-23.

6. Buchinski, Edwin. Tepesh, Ingrid. A Proposal for the Cataloguing of Related Works and for Distributing These Records in the Canadian MARC Format. 1974 (Unpublished).

7. Burns, Barrie A.F. The CONSER Minimum Data Element Set for the Interchange of Bibliographic and Holdings Data. (Paper presented at the CACUL Workshop on Automated Systems, Winnipeg, June 22-3, 1974).

8. Burns, Barrie A.F. Pridmore, Peter. "TESA-1/Cataloguing: A Second Look". In Library Automation in the Nation; papers presented at the CACUL Workshop on Library Automation, Regina, June 10-12, 1972. Ottawa, Canadian Association of College and University Libraries, 1973. pp. 10-1-57.

9. Canadian Task Group on Cataloguing Standards. Cataloguing Standards: the Report of the Canadian Task Group on Cataloguing Standards, with Recommendations to the National Librarian, Dr. Guy Sylvestre. Ottawa, National Library, 1972.

10. Chapple, Sharon E. The Canadian MARC Tape Pilot Distribution Project: a Progress Report. (Paper presented at the CACUL Workshop on Automated Systems, Winnipeg, June 22-3, 1974).

11. Clement, Hope E.A. Developments Toward a National Bibliographic Data Base: Overview. (Paper presented at the CACUL Workshop on Automated Systems, Winnipeg, June 22-3, 1974).

12. MARC Task Group. Canadian MARC; a Report of the Activities of the MARC Task Group Resulting in a Recommended Canadian MARC Format for Monographs and a Canadian MARC Format for Serials. Ottawa, National Library of Canada, 1972.

# END

## DEPT. OF HEW

## NAT'L INSTITUTE OF EDUCATION

## ERIC

## DATE FILMED

# AUG 14 75